

Patent claims

1. A high-pressure die-cast cylinder crankcase, characterized in that at least one continuous row (4) of at least two cylinder barrels (5) is cast into the cylinder crankcase (2),
the row of cylinder barrels (4) comprises a sand casting or chill casting,
the row of cylinder barrels (4) has at least one water jacket (6),
the water jacket being at least partially closed with respect to a side (18) of the cylinder crankcase (2) which faces a cylinder head.

2. A high-pressure die-cast cylinder crankcase, characterized in that at least one continuous row (4) of at least two cylinder barrels (5) is cast into the cylinder crankcase (2),
the row of cylinder barrels (4) comprises a sand casting or chill casting,
the row of cylinder barrels (4) has at least one water jacket (6),
the at least one cooling passage (10) of the water jacket (6) runs through the web region (12) between the cylinder barrels (5).

3. The high-pressure die-cast cylinder crankcase as claimed in claim 1 or 2, characterized in that the row of cylinder barrels (4) consists of an iron-based cast material.

4. The high-pressure die-cast cylinder crankcase as claimed in one of claims 1 to 3, characterized in that the row of cylinder barrels (4) consists of a hypereutectic aluminum-silicon alloy.

5. The high-pressure die-cast cylinder crankcase as claimed in one of claims 1 to 4, characterized in that the row of cylinder barrels (4) consists of a standard aluminum casting alloy, and a cylinder running surface is coated with a layer that is able to withstand frictional loads.

6. The high-pressure die-cast cylinder crankcase as claimed in claim 5, characterized in that the layer is a thermally sprayed layer.

7. A process for producing the high-pressure die-cast cylinder crankcase as claimed in claim 1 or 2, comprising the following steps:

casting a row of cylinder barrels (4) using a lost core so as to form an at least partially closed water jacket (6),

placing the row of cylinder barrels (4) into a high-pressure die-casting die of a cylinder crankcase (2), and

high-pressure die-casting the cylinder crankcase (2) and at the same time casting in the row of cylinder barrels (4).